



Mcllvaine – Hot Topics

“FGD Scrubber Components”

Augusta Fiberglass – November 8, 2012

By: Doug Reinke

Innovative Fiberglass and Dual Laminate Solutions



Safety First – Working at the Client’s Plant



Fabrication shop on-site



Working on field assembly

- Safety is our #1 Priority.
- Work at client sites, Blackville, SC, and Ocean Springs, MS.
- Work Non-union and Union sites.
- Safety Program Includes all Shareholders – Project Team



Mobilize to the Power Plant Site



Moving equipment on site is the first step for field fabrication



Buildings and Staging Area

Fabrication Building for Chimney Liner Cans

- 38' diameter X 40' tall each, staging area

FGD Scrubber - JBR Building – 150' X 150'

Office and raw material storage

Heavy equipment for fabrication and transport





Leader in Field Fabrication and FRP Construction

In 1988, first to fabricate the largest field wound FRP tanks
- 52' diameter X 42' tall.



In 2001, first to achieve compliance with a new field fabrication, field assembly and field repair accreditation through ASME
Additional skill set required for Field Project Management, Scheduling, QA/QC, Safety, Project Controls, Reporting, etc. associated with large field projects on the client's site.
We have staff to run 10 simultaneous field projects



Large Equipment Field Fabricating Capabilities



FGD Equipment Fabrication Onsite for Power Plants

Since 2003, our field operations have been involved in the manufacture:

- (7) JBR's, (7) Gas Risers/Mist Eliminators/Turning Vanes
- 53 large diameter stack liners at 30 different Power Plants
- 58,000'+ of liner/duct = over 11 miles
- ***Over 30 million pounds of field fabricate FRP equipment.***



First Patented Mandrel for Large Field Vessels

Huge innovation investment for power industry client and advancing FRP applications

(5) - FRP Vessels 119' Diameter X 55' High

(2) - FRP Vessels 108' Diameter X 55' High



We have field fabrication experience with the largest vessels in the world. B&D Plastics fabricates the largest dual laminate equipment in the world.



World's Largest All FRP Process Equipment



System weighs more than 1.5 million pounds



Largest FRP and Dual Laminate Products

- Products
 - Vessels ($\phi 120'$) 4 Million Gallons
 - Stack Liners ($\phi 38'$)
 - 23' Sq to 26' - 7" Transition
 - FRP Gas Riser ($\phi 68'$)
 - Mist Eliminator ($\phi 68'$)
 - FRP Ducts and Elbow ($\phi 38'$)
 - FRP Hoods, Cover (104' X 42')
 - Storage Tanks
 - Scrubber Systems – 119' X 140' High
 - Tank ($\phi 25'$ X 30') High Dual Laminate
 - Scrubber ($\phi 20'$ X 100') Dual Laminate



What diameter tank can be shipped over the roads?



Blackville fabricated - 45' diameter tanks shipped over the road





Innovative Field Assembly Solutions





Innovative Solutions Save Capital Investments

Power Plant Benefits:

- Safer – less work on-site
- Less site congestion
- Reduced schedule



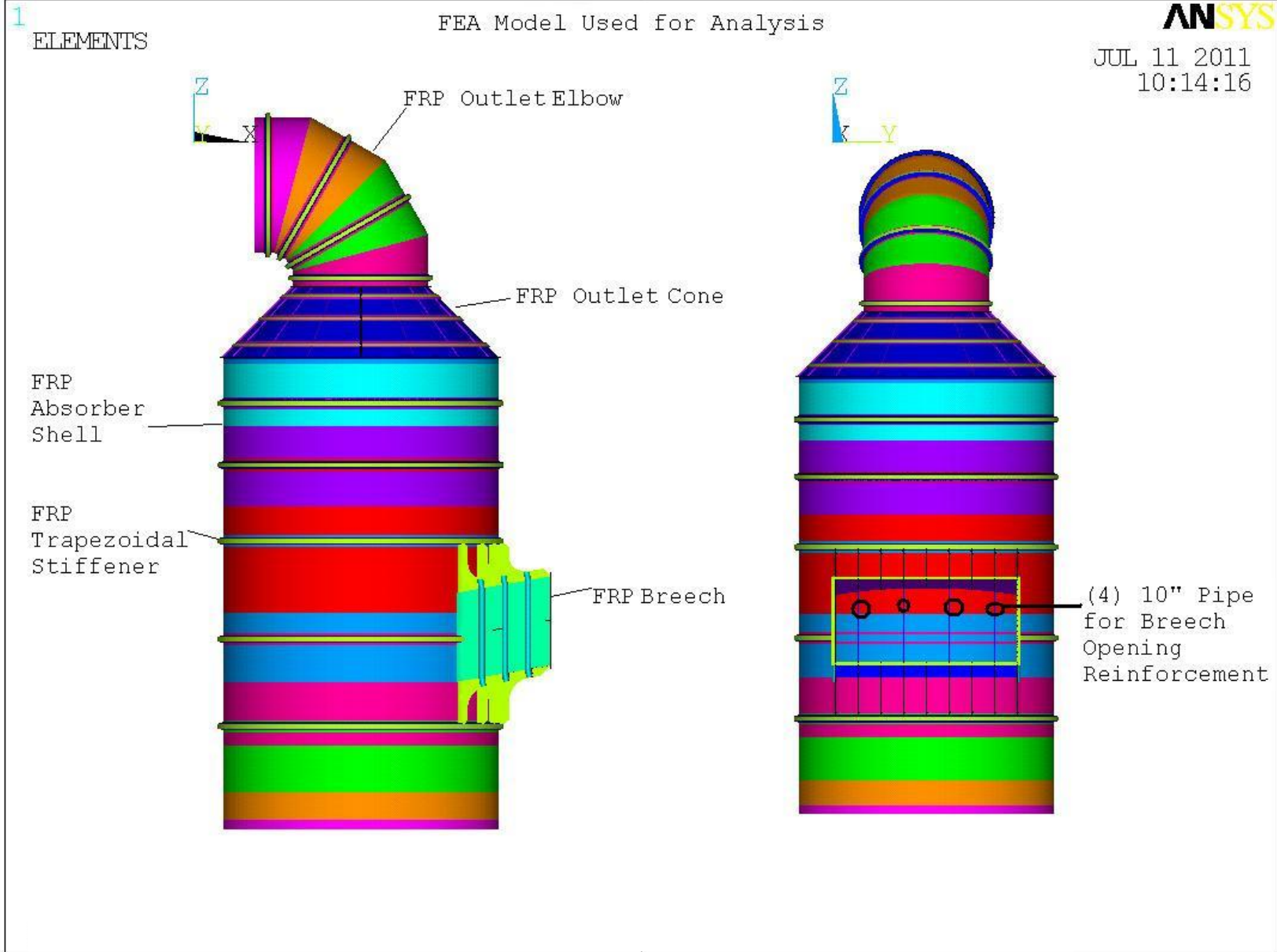


Design Methodology and Finite Element Analysis

- Design Conditions
 - Temperature
 - Pressure and Vacuum
 - Wind, Seismic & Snow load
 - Internal live load
 - Abrasion
 - Support method & locations
 - Oblation (50' ϕ to 13' width)
 - Insulation and Heat Panels
 - Agitator Mixer Load
 - Ladder and Handrail
 - Lifting analysis

(8) Degreed Engineers on staff







Heavy Equipment Investment

In the shop, in the field

- Fabricating
- Assembly
- Testing – Hydro
- Loading
- Transporting





AFC and B&D Plastics Both Can Deliver by Barge





Why Augusta Fiberglass - Summary

- Excellent safety record in shops and with field projects.
- Leader in Process, many “firsts” with – vessels, duct, tanks.
- RTP-1 since 1995 - Blackville & since 2001 for field projects.
- Fabricate and assemble ASME stamped vessels worldwide.
- Design methodology with FEA.
- Patented Mandrel for large field fabricated vessels.
- Expanding dual laminate operations, RTP-1 soon.
- No debt - \$50 Million bonding plus a field service offering.
- Our innovation can address all of your FRP requirements.

We innovate solutions to solve complex client needs!



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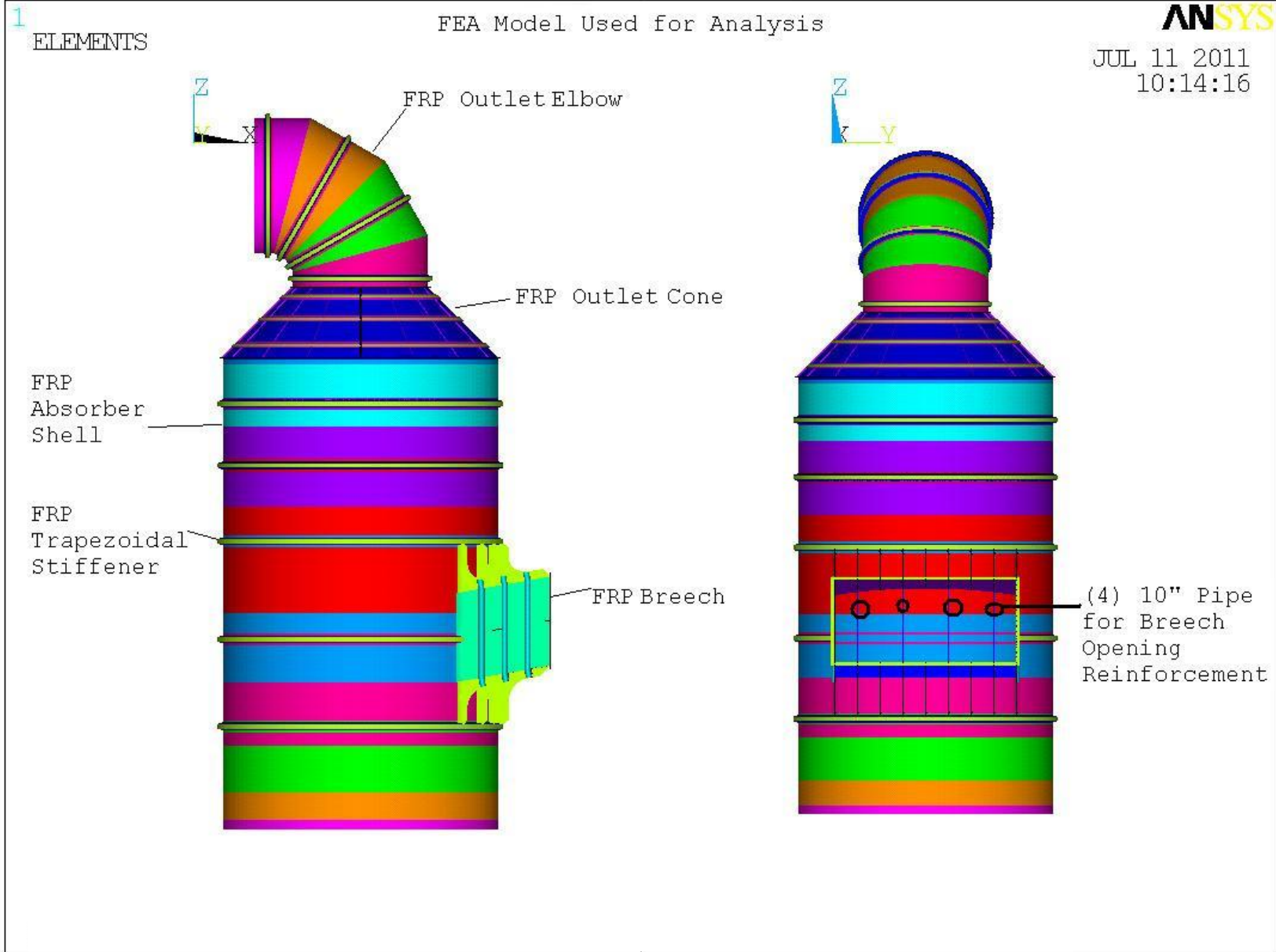


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